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(54) **ELASTOMERIC EJECTION SYSTEM WITH ACOUSTICALLY IMPROVED CHECK VALVE**

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(57) **ABSTRACT**

A system for launching bodies from a submarine includes a pump for transferring seawater to an elastomeric ejection tank, and a check valve that permits transfer of the seawater to the tank, and closes upon filling of the tank. The valve includes a head and a seat, a stem having fixed thereon the head and a disk having a circular protrusion extending toward the seat, a cup mounted around the stem and having a circular depression in a surface thereof, and radially extending holes disposed in the cup. During valve closure, the disk protrusion enters the cup depression forcing water in the depression to exit the cup through a primary restrictive path of an annular gap between the protrusion and depression and a secondary restrictive path of the radially extending holes, to slow the valve head in movement during engagement with the valve seat.

19 Claims, 4 Drawing Sheets